

ARV Project / Green infrastructures

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Ajuntament  de Palma



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What is ARV?

ARV is a H2020 EU-funded project aiming at creating **climate positive circular communities** in Europe and increasing the building renovation rate in the continent.

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Project Coordinator:



Palma Demo coordinator:



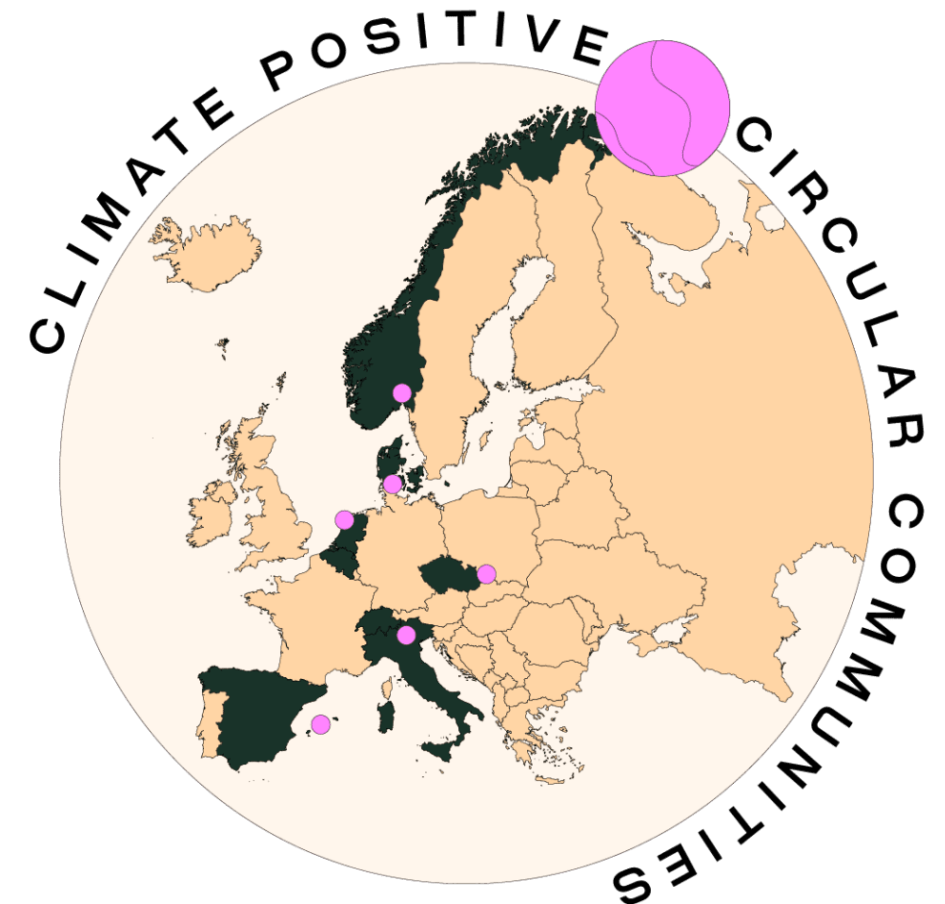
Palma Partners:



metrovacesa

AIGUASOL

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What is a CPCC?

A Climate Positive Circular Community (CPCC) is an urban area which aims to achieve net zero greenhouse gas emissions, enables energy flexibility, and promotes a circular economy and social sustainability.

The CPCC concept focuses strongly on the interaction and integration between new and regenerated buildings, users, and energy systems, facilitated by ICT to provide attractive, resilient, and affordable solutions for citizens



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KEY ACTIONS

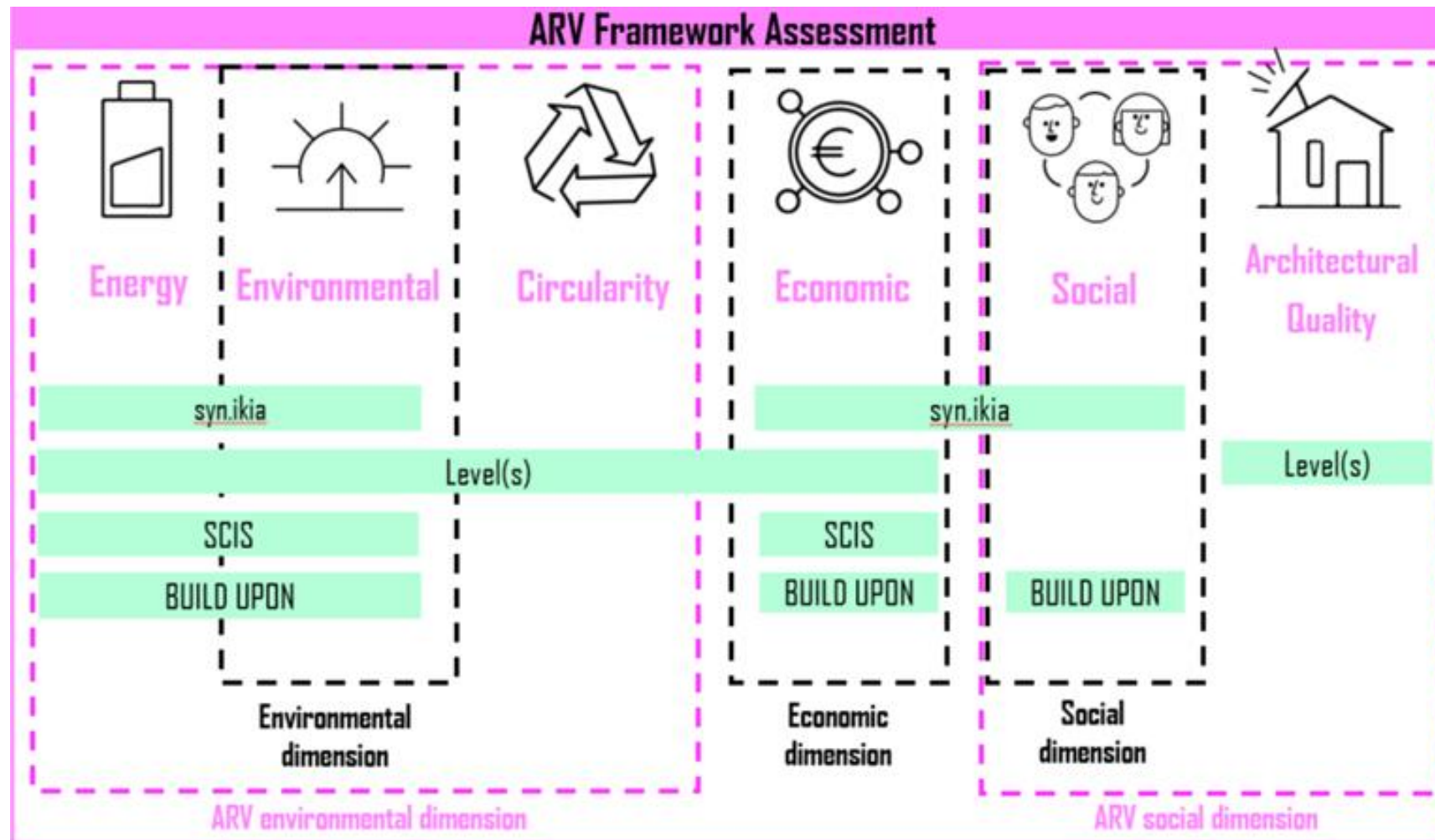
1. Large scale-retrofitting
2. New Positive Energy Social Housing
3. New high-efficiency residential multifamily buildings
4. Energy renovation of the flagship heritage protected building
5. Publicly funded energy communities
6. Living Lab and One-Stop-Shop

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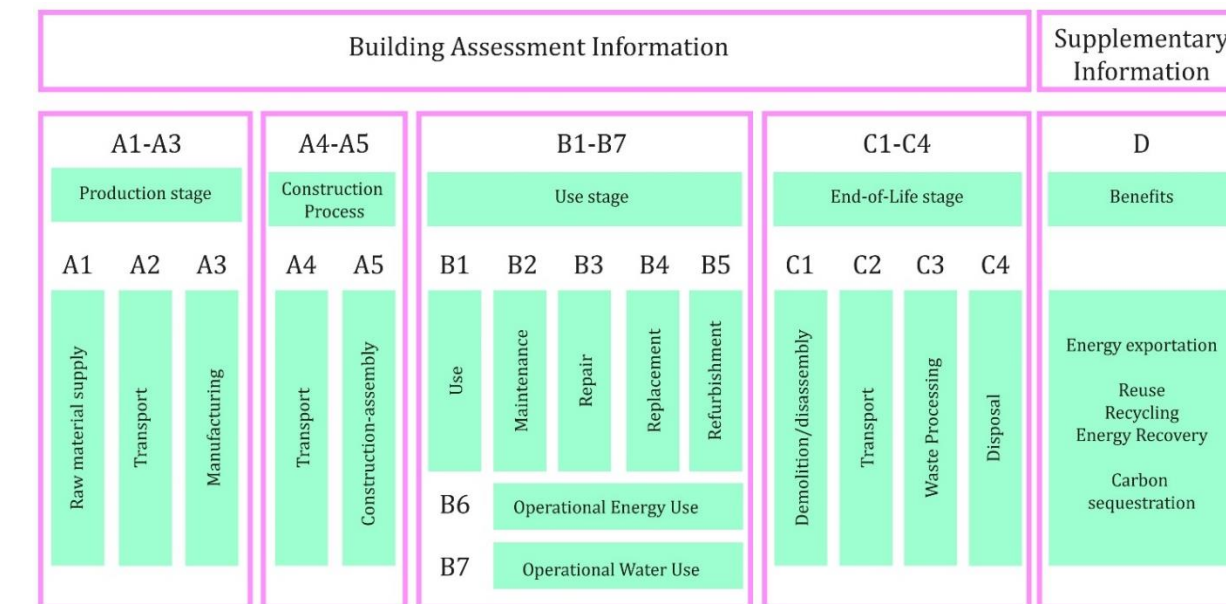
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Sustainability assessment framework



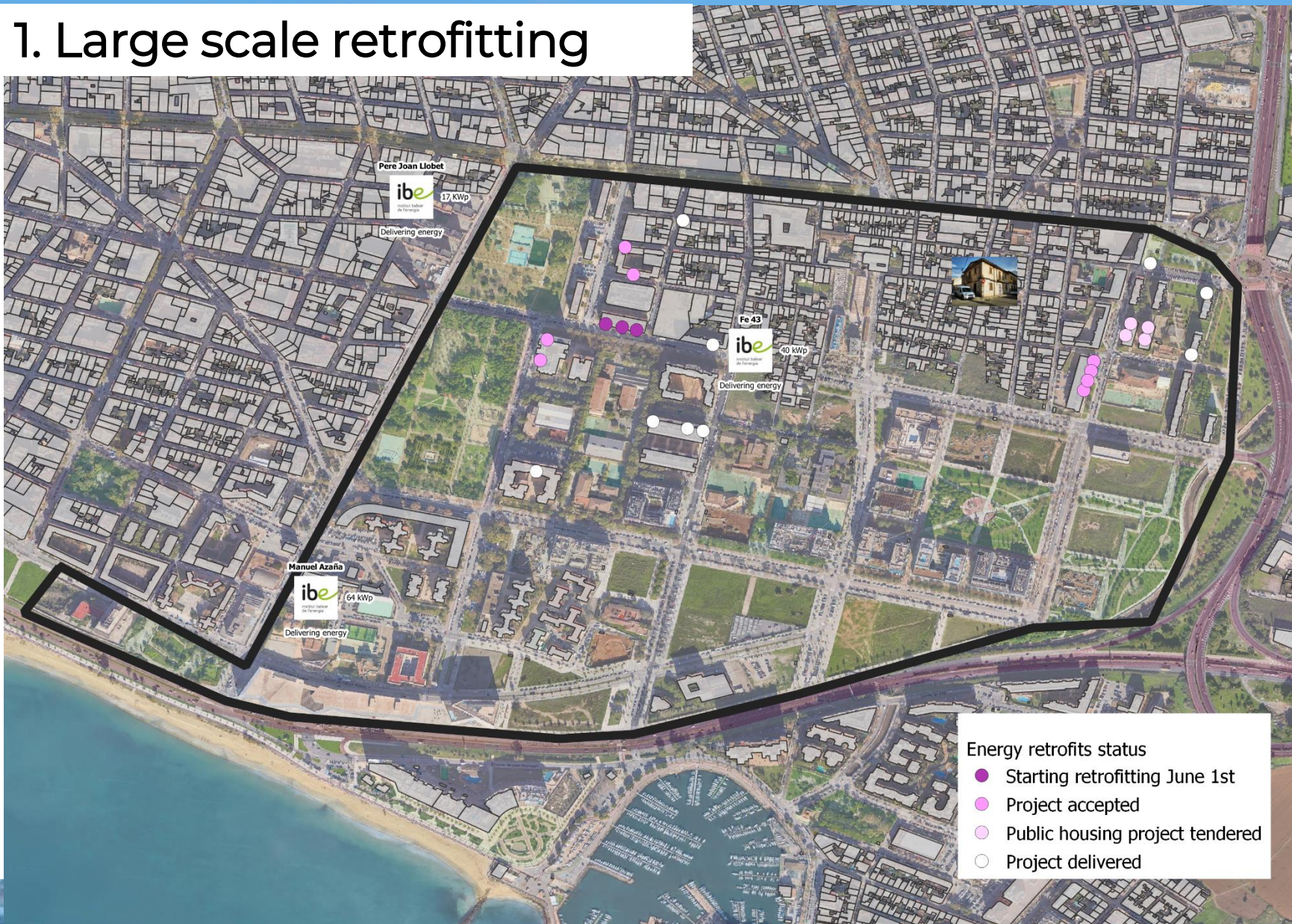
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LCA for buildings



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1. Large scale retrofitting



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- 23 energy retrofitting projects have been drafted.
- Altogether affecting 585 dwellings

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1. Engagement



2. Monitoring



PLIEGO DE PRESCRIPCIONES TÉCNICAS

LICITACIÓN DEL SERVICIO PILOTO DE ORIENTACIÓN A LA
REHABILITACIÓN A ESCALA DE BARRIO DENTRO DEL DISTRICTE
D'INNOVACIÓ DE LLEVANT EN EL MARCO DEL PROYECTO EUROPEO
ARV



El proyecto ARV ha recibido financiación del programa de investigación e innovación Horizon 2020 de la Unión Europea en virtud del convenio de subvención núm. 101036723.

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4. Next Generation Funding

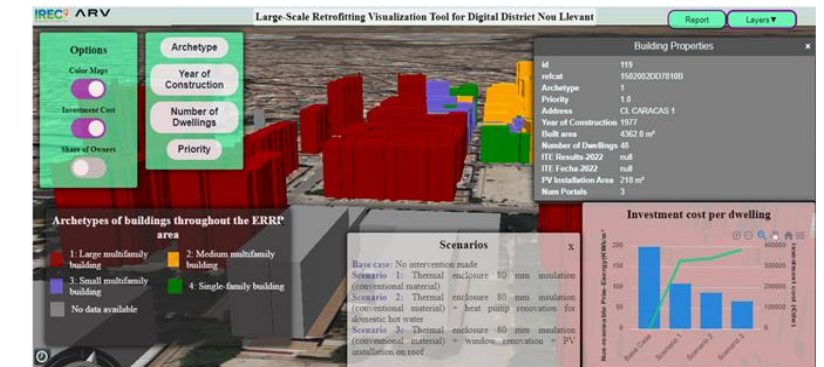
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3. PPP collaboration

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5. Digital tools



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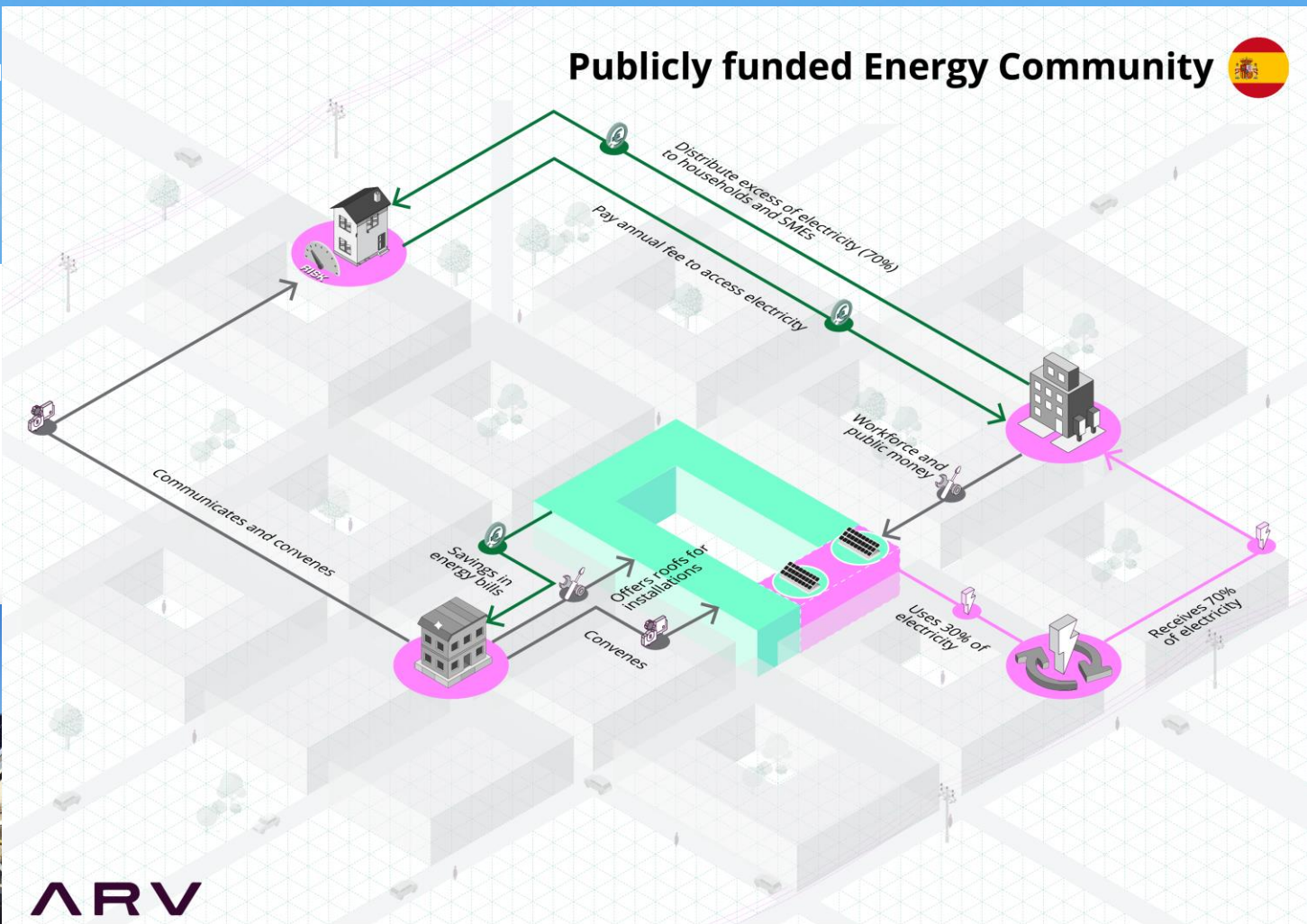
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4. Energy renovation of flagship heritage

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5. Publicly funded energy communities






ARV

Stakeholders

-  **Households and SMEs**
Defined by income. Households have access to lower electricity prices
-  **Renewable energy**
-  **Municipal utility company**
-  **City council**
Local public entity who disseminates the model among citizen and engages with them.

Physical assets (Installations and resources)

-  Demo building (part of the demo area)
-  School
-  Solar PV panels



Financial KPIs

-  Finances


Non-Financial KPIs

-  Electricity

Processes

-  Installations and operation
-  Tendering and convening

Citizen Energy Community (CEC) Tool Report

 **Building name:** CEIP Gabriel Vallseca
Address: Carrer Mare de Déu de la Victòria, 36



Roof surface

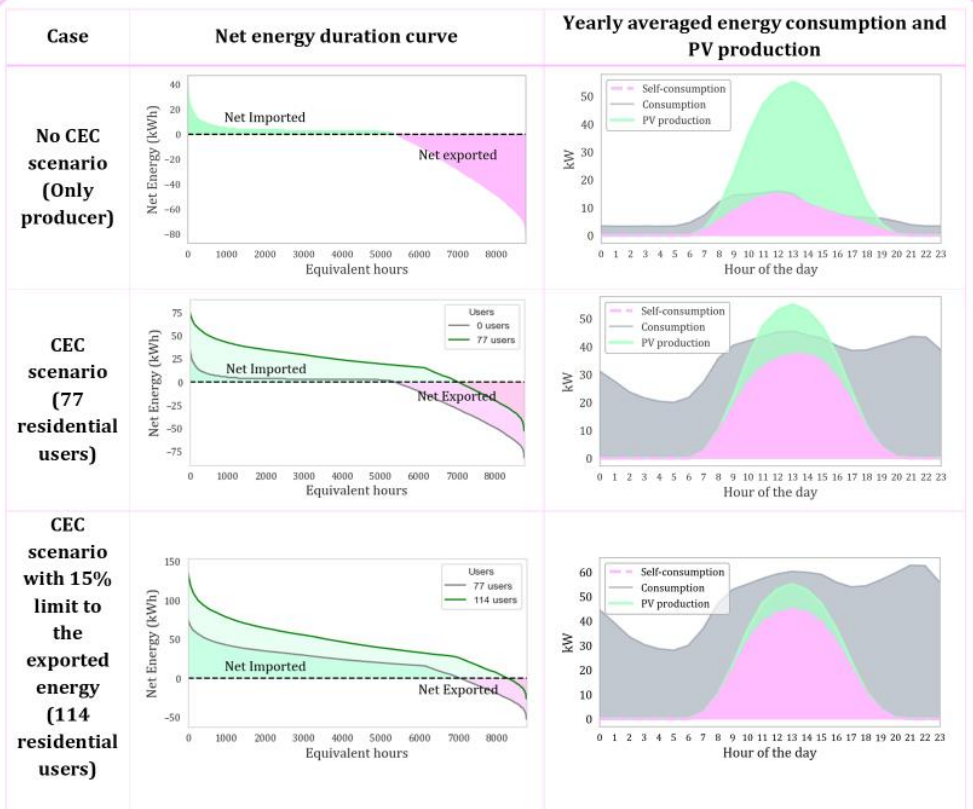
Technical characteristics of the PV installation

Total number of PV modules	206 (157+49)
Peak power of the installation [kWp]	111.2
Annual energy yield [MWh]	146.9
Specific energy yield [kWh/KWp]	1 321.04
Annual energy consumption [MWh]	66.8
PV panels angle [°]	10
PV panels azimuth [°]	-41



Radius for the installation

Analysis of the Citizen Energy Community scenarios



KPI	Scenario		
	114 users	77 users	No CEC
γ supply	0.85	0.75	0.28
γ load	0.29	0.35	0.62
γ grid	0.71	0.66	0.38

It can be concluded that net exported energy has reduced from 72% (Case 0 – no residential users) to 25% (Case 1 – 77 residential users) to 15% (Case 2 – 114 residential users).

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6. Living Lab and One-Stop-Shop

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**EUROPEAN CLUSTER
COLLABORATION PLATFORM**



Govern de les Illes Balears

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**“There is no logic that can be superimposed on the city;
people make it, and it is to them, not buildings, that we
must fit our plans.”**

Jane Jacobs

THANK YOU!

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